Green synthesis of protein protected fluorescent gold nanoclusters (AuNCs): Reducing the size of the AuNCs by partially occupying the Ca²⁺ site by La^{3+} in apo- α -lactalbumin

Deepthi S. Yarramala,^a Ananya Baksi,^b Thalappil Pradeep^{b,*} and Chebrolu Pulla Rao^{a,*}

^aDepartment of Chemistry, Indian Institute of Technology Bombay, Powai, Mumbai - 400 076, India, E-mail: cprao@iitb.ac.in. ^bDST Unit of Nanoscience and Thematic Unit of Excellence, Department of Chemistry, Indian Institute of Technology Madras, Chennai - 600 036, India.

Contents Page no.

Figure S1: TEM images of concentration dependent La³⁺ incorporated α-LA-AuNCs **S**1

Figure S2: TEM images of concentration dependent La^{3+} incorporated α -LA-AuNCs S2

Figure S3: TEM micrographs of apo- α -LA with La³⁺ at different regions S2

Figure S4: TEM micrographs of AuNCs formed upon introduction of La³⁺ into the apo- α -LA in different regions

Figure S1. TEM micrographs of concentration dependent La^{3+} incorporated α -LA-AuNCs; (a)

0.1 mM La³⁺, (b) 0.4 mM La³⁺, (c) 0.8 mM La³⁺ and (d) 1.2 mM La³⁺.



S2



Figure S2. TEM micrographs of AuNCs (a) holo- α -LA-AuNCs ; (b) α -LA-0.1 mM Gd³⁺-AuNCs; (c) α -LA-0.4 mM Gd³⁺-AuNCs and (d) α -LA-0.8 mM Gd³⁺-AuNCs.



Figure S3. TEM micrographs of apo- α -LA with La³⁺ at different regions.



Figure S4. TEM micrographs of AuNCs formed upon introduction of La^{3+} into the apo- α -LA in different regions.